Broade 2 is Reactions Trayled Rural areas need or dabbane to this. But Root.

L. Mitchell says derapulation has freed carriers from any real obligation to provide

COMPUTERWORLD

THE Disaster Recovery

Yesterday's plan may look to a dead end to day. Here's how to update it

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AUGUST 27, 2007 VOL. 41, NO. 35 \$5/COPY

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Qualified data center execs grow scarce as the skills they need expand. PAGE 18

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Case Study: IT is supporting a total revamp of California's energy market. PAGE 34

Creating, changing and deleting user accounts is a pain, but new software can simplify the process. PAGE 42



All we are saying is give perfectly good hardware a chance.

VoIP is the future. So step into it.

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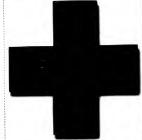
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38 Security Manager's Journal: Security Crashes Into Productivity. C.J. Kelly didn't tell those users they could have laptops, but now that they do, she's the one who has to tell them they can't.

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An outsourcer is neither savior nor Satan. It's a business partner that shares your goals but needs to be managed, says Sean C. Barker.

42 Waiting for the Go

Creating, changing and deleting us accounts drains IT resources and results in chronic backlogs and frustrated - even mutinous users. But new software can speed and simplify the proces



Fujitsu recommends Windows Vista Business.

Fujitsu LifeBook Notebook Your first-class ticket to reliability.

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Reliable Fujitsu LifeBook notebooks are the engines that drive your productivity. The Fujitsu LifeBook family ranges from ultralight convertible notebooks with intuitive pen-driven touchscreen input to powerful desktop replacement models with the latest Intel® Centrino® Duo Mobile Technology and versatile modular bays. Whatever your needs, you'll find a LifeBook that delivers the ideal blend of innovative features that make you more productive. What's more, because reliability is even more critical for mobile users, we manufacture LifeBooks in-house so we can maintain our high quality standards throughout the entire process. Go to us.fujitsu.com/computers/reliability for more information.

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MULTIPLE CONNECTIVITY OPTIONS-













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EDITOR'S NOTE Don Tennant

Defying Explanation

RIVING TO WORK one morning last week, I passed a horse trailer that bore the warning that you routinely see on horse trailers: "Caution: Horses." I'm sure my face bore the expression that people routinely see on my face: befuddlement.

I've just never understood the danger or why I need to exercise caution when I'm in the proximity of a horse trailer.

deal you can discern from the rear ends of a couple of horses, and I suppose it's possible they could be plotting something at the other end. But the threat still seems overstated.

So as I ponder the rationale for the alarm, it occurs to me that I've come across a lot of things recently that are equally inexplicable. Here are a few of them:

A reader in Arizona who wrote in response to my recent editorial on the national ID card debate took issue with my description of a July 4 ceremony that conferred U.S. citizenship on 26 people from around the world - specifically, with my referring to them as "Americans." "Just because a bunch of people became U.S. citizens one day doesn't make them 'Americans," he wrote, "It just makes them here legally. I

Granted, there's not a great | would like to think it takes much more than an ID card or piece of paper to say you're an 'American.' " I wrote back and asked him to explain that one for me, but he hasn't responded. Perhaps he was busy on border militia duty, keeping us real Americans safe from the Brown Menace.

How people who are used to communicating in IM-speak will ever make it in the real world is beyond me. A comment posted on our Web site last week in response to a story about Windows Live Messenger being integrated into the Bebo social networking site read as follows: "kool but sum people u dnt know

■ Next thing you know. Dell will have to halt shipments because of faulty twist-ties on the power cords.

and if dev send u virses then what?? haha im clever hey." Wow. That may help explain this concurrent Shark Bait submission: "Is anyone else having a problem filling IT positions? I can't remember ever seeing the market quite this bad for the employers. It seems like I'm just scraping the bottom of the bar-

rel with the résumés I have

been getting. What's Up?" It's hard to figure how it can be that Dell, the PC company that once seemed incapable of doing anything wrong, now seems almost powerless to do anything right. It's bad enough that the company is mired in the muck of a financial scandal in which senior managers were found to have changed corporate account balances in order to meet quarterly financial targets. Worse for users are the ongoing notebook shipment delays,

which have a lot of people



throwing up their hands in exasperation and swearing off Dell altogether. What's especially perplexing is that a major reason for the delays, according to Dell officials, is problems with painting the things. Next thing you know, they'll have to halt shipments because of faulty twist-ties on the power cords.

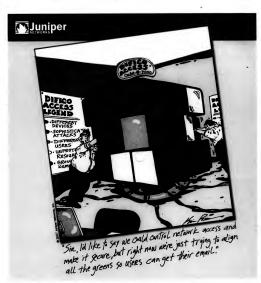
"Caution: Cows." Per-

haps that warning should be emblazoned on every pallet of Gateway PCs that's shipped into China. That would make about as much sense as the fact that up until this month. when Gateway announced a distribution agreement with a Chinese outfit called Digital China, Gateway PCs weren't being shipped into China. What on Earth have Gateway officials been waiting for all these years? I can't think of a single other major PC maker that hasn't been entrenched in China for at least a decade, so the notion that the conditions weren't right until now is stupefying. If anything, the conditions now are more likely to butcher a newcomer. Those greener pastures have gotten awfully crowded over the years.

comment related to a horse's hindquarters from anyone who disagrees with any of this. I was feeling charitable. ■ Don Tennant is editor in chief of Computerworld. Contact him at don tennant@ computerworld.com.

And yes, I know I left

myself wide open for a



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III EDITORIAL

Salter In Chief Don Tennent tive Editors Witch Betts. helia King (events) ree Editors Kathle en Fanning (special reports) ing Editor/Proc le Lee DeFiliopo gn Director Stephanie Faucher enal Correspondents Gary Anthes, les Hoffman, Julia King, Robert L. Mitchell or at Large Mark Hall mior House Columnist Frank Hayes Art Director April O'Connor

ate Art Director Owen Edwards mearch Manager Mari Keele mier Copy Editors Eugene Derr price Sembators w Editor Donna Sussman

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III CONTACTS

Phone numbers, e-mail addresses and reporters' beats are available online at ComputerworkLoom (see Contacts link at the bottom of the home pag Letters to the Editor Sand to letters@ autenworld.com. Include an address and one number for immediate verification. hers will be edited for brevity and clarity 24-hour nous tip hot line (508) 620-7716 iptions and back issues (888) 559

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■ LETTERS

State of IT in Pakistan

We appreciated Patrick Thibodeau's recent article about Pakistan's burgeoning IT industry and the country's growth as an IT outsourcing center ["Pakistan's Offshore IT Potential Held Back by Political Risks," Computerworld.com, July 23]. As managing director of the Pakistan Software Export Board, I wanted to clarify several points. Founded in 1995, the PSEB is a government agency whose mandate is to promote Pakistan's IT industry. Our mission is to grow this industry from \$2 billion in 2006 to \$10 billion by 2010. The PSEB's efforts are part of a plan that has included development of about 750,000 square feet of IT-enabled space leased out to IT companies in PSEB-designated IT parks. Construction of new national IT parks with several million square feet will commence shortly. The PSEB also operates a successful quality certification program under which 100 IT companies have received ISO certification.

Currently, over 1,000 IT comp nies are registered with the PSEB. They range from world-class services companies like NetSol Technologies, the first Pakistani IT company listed on the Nasdaq, to smaller, product companies working in niches like mortgage lien processing, enterprise computing resource management and business process management. International call centers are also growing rapidly in the country. Collectively, the Pakistan economy employs over 110,000 IT professionals, and each year approximately 20,000 new IT professionals enter the job market.

Recognizing the need to continue to develop skilled IT workers, Pakistan has over 100 universities and over 1 000 other academic institutions providing computer- and IT-related education programs. The PSEB also maintains an internship program that has received national recognition for placing 3,000 interns - 80% of whom have gained permanent employment within the IT industry from their internships. Other PSEB programs include research reports, international marketing, human capital development and public policy formulation.

I invite you to explore Pakistan in greater depth and to look beyond the media's narrow reporting to see the vibrant future that is emerging. Wywyf Hussain, managing director, PSFR. Islamabad

COMPUTERWOOD D. COM

Managing Data Centers Wirelessly

iess data center administration to take off. Here are s

is the Future of Cell

Linux Text Editors:

Which One Revs Your Engine? Our reviewer test-drives nine free Linux test addors. Find out which ones crossed he finish line ahead of the pac

Inside Apple's iLife 'O' The latest version of Apple's me

10 Statements That Make

ecurity Pros Cringe

6 COMPUTERWOOLD AUGUST 27, 2007

_INFRASTRUCTURE LOG

_DAY 75: These cables are everywhere!! Connecting underutilized servers to more underutilized servers. Our energy usage is out of control!!

_DNY 77: I found a way out of this mess: the superefficient IBM BladeCenter. It helps us manage power and cooling usage with intelligent Cool Blue" technology. And with its new Quad-core Intel" Xeon* processor, we won't have to sacrifice performance for efficiency. So out with cobles, in with blades.

_DAY 79: Gil's stuck under the ball. Tried calling his wife.
Turns out the photo of his family came with the frame.



Quad-core. Unmatched



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Digest COMPTIERORILACION

THE WEEK AHEAL

MONDAY Gartner's Financial Services Technology Summit opens. Former U.S. Rep. Michael Oxley, a co-author of the Sarbanes-Oxley Act, will deliver a keynote address.

WEDNESDAY Novell is scheduled to report the financial results for its fiscal 2007 third quarter.

THURSDAY Dell is slated to announce preliminary financial results for its fiscal 2007 second quarter as it works on restating results from 2003 through 2006.

GOVERNMENT

California Charges ES&S Illegally Sold E-vote Machines

FECTION SYSTEMS
8: Software Inc. illegally sold nearly
1,000 uncertified
electronic voting machines
to five California Secretary of State Debra Bowen
charged last week.
"Given that each machine."

costs about \$5,000, it appears ESSS has taken St million out of the pockets of several California counties," she said in a statement. Bowen said she will seek a penalty of \$9.72 million based on the maximum fine of \$0,000 per uncertified machine—plus the cost of the machines if Omahabased FSSS is found to have

broken the law.

According to Bowen,
ES&S sold 972 of its Auto-

for the same and t

was certified by federal election officials in August 2006, added Bowen. The uncertified machines were sold to San Francisco, Colusa, Marin, Merced and

Salana counties

California law requires that all e-voting machines be certified by the state before use. Vendors are also required to get the secretary of state's approval of any

changes to a certified voting system, Bowen noted. The secretary of state's

office will hold a public hearing on the charges on Sept. 20 and then bring the case to the state courts. In a statement, ES&

to the state courts.

In a statement, ES&S said it has "the greatest respect for the federal

and state
certification processes. We
have a
long history
of complying
with those extensive and thor-

tensive and thorough examinations of voting technology."

The company said it will work with California to re-

solve the issue.

Farlier this month, Bowen mandated new security standards for the state's e-voting systems.

The order came just days after the release of a state-sponsored review of California's e-voting machines by the University of California, which found security problems in every system tested.

Testers were able to overwrite firmware, bypass locks on the systems and fonge voter eards on various machines from multiple yendors, according to the

report.

— Grant Gross, IDG News Service

Computer Crash KOs Wells Fargo ATM Network, Other Services A WIDESPREAD computer crash early last week

DATA CENTERS

knocked Wells Fargo & Co.'s online and automated teller machine services offline for as many as three days.

The San Francisco-based financial services firm did not disclose the cause of the crash but acknowledged that the croblems were

not disclose the cause of the crash but acknowledged that the problems were serious enough that the company had to restore data from backup sources. "Using our backup facilities, we restored internet

banking service in about one hour and 40 minutes," the company said in a statement The company also noted that point-of-sale transactions, loan processing and

wire transfers were affected by the outage. Wells Fargo did not respond to a request for further comment on the

incident.

ROBERT McMILLAN. 10G NEWS SERVICE



Given that each machine costs about \$5,000, it appears ES&S has taken \$5 million out of the pockets of several California counties.



THE WEEK AHEAD

40MDAY: Gartner's Financial Services Technology S nes-Oxiey Act, will deliver a keynote address

WEDNESDAY: Movell is scheduled to report the final results for its fiscal 2007 third quarter.

THURSDAY: Dell is slated to a

GOVERNMENT

California Charges ES&S Illegally Sold E-vote Machines

LECTION SYSTEMS & Software Inc. illegally sold nearly 1,000 uncertified electronic voting machines to five California counties in 2006, California Secretary of State Debra Bowen charged last week. "Given that each machine

costs about \$5,000, it appears ES&S has taken \$5 million out of the pockets of several California counties," she said in a statement. Bowen said she will seek

a penalty of \$9.72 million based on the maximum fine of \$10,000 per uncertified machine - plus the cost of the machines if Omahabased ES&S is found to have broken the law.

According to Bowen, ES&S sold 972 of its Autolike this are the su

Mark Phase 2 Model A 200 e-voting machines to five counties last year without submitting them to her office for certification. Some were shipped before the model

was certified by federal election officials in August 2006, added Bowen. The uncertified machines were sold to San Francisco.

Colusa, Marin, Merced and Solano counties. California law requires that all e-voting machines

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Testers were able to overwrite firmware, bypass locks on the systems and forge voter cards on various machines from multiple vendors, according to the report.

- Grant Gross, IDG News Service



Z Given that each machine costs about \$5,000, it ears ES&S has taken llion out of the pockets of several California counties. **DEBRA BOWEN. CALIFORNIA SECRETARY OF STATE**

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COLLABORATION

IBM Turns to Siemens For Help in Taking On New Microsoft Tools



nounced that it will license parts of Siemens AG's Open-Scape software to add unified communications capabilities to its Sametime instant messaging and webconferencing

The companies did not disclose the value of the deal, which was announced at the VoiceCon conference in San Francisco. Analysts said the move is an effort by IBM to bring Sametime, part of its Lotus Notes messaging and collaboration suite, up to par with Microsoft Corp.'s

Office Communications Server (OCS) 2007, which is slated to ship on Oct. 16. "This sets IBM up to be a more credible player in

unified communications," said Barry Marks, an analyst at IntelliCom Analytics LLC in Union, N.J. "This is something that Sametime needed." OpenScape will let Sametime users manage communications across multiple telephone technologies, including cellular and voice over IP. It also will allow users to access calls through most applications. IBM said.

tions, IBM said.
Chris Miller, director of messaging and collaboration at Connectria Corp., a managed IT services company in St. Louise support for VoIP technology could cut costs significantly for corporate users. Connectria sells and supports Sametime and is also a Sametime user.
Miller noted that Same will said to the same time and it also a Sametime user.

time currently has plug-ins that can add some Open-Scape capabilities but IT administrators must monitor and maintain them.

tor and maintain them. OCS 2007 will let companies set up VoIP phone systems and manage corporate instant messaging, e-mail and videoconferencing on a single IP network. Microsoft announced at the conference that it will offer OCS as a hosted service at an undisclosed future date.

— Eric Lai and Todd R. Weiss

with Stephen Lawson of the IDG News Service

Short Takes

IBM's unit is evaluating whether to make parts

available to the open-source community. Executives said Rational hopes to make the Jazz software more pervasive in IT shops.

A technical committee in rejected

rejected application to ake its

file format a standard, just days before a scheduled Sept. 2 vote on the format by the international standards group

Police in Turkey have arrested and charged the

and charged the Ukrainian national with trying to sell data hacked and stolen from retailer

TJX disclosed the massive breach early this year. CEO said he plans to

sau the plant sto step down from his post at the end of the year. The announcement comes four months after an e-filing problem involving the company's software.

Monster Hit With Theft of Client Data

ATTACKERS using a Trojan horse stelle mere than 1.5 millien records belonging to users of Mouster Worldwide Inc.'s online job search service, the company acknowledged last week.

infectorier.Monetres, stiller the pillered data to send Mo ster.com users phishing o-s rare on their rachines, said mesercher

The stoise records include the names, e-mail addresses, home addresses, phone numbers and résumé identification numbers of 1.3 million users of Monster's services, said Amade Hidaigo,

The thoft was discovered Aug. 17, and last Thursday Monster.com disclosed that it found a remote server; used by the attackers to store

This second provinces.

"Moneter has identified and shut down a regue server that was accessing job seeker contact information through uses their provinces are of comprovised leaftings are provinced.

log-in credentials," New Yorkbased Monster Worldwide said in a statement.

"The company is currently analyzing the number of job seeker contacts impacted by this action and will be communicating with those affected as appropriate," the statement

Hidalgo said that the legitimate log-ins were likely stolen from recruiters and corporate human recources personnel.

i mperainlations. 10 Our Linalists!

The IMW "Best Practices in Infrastructure Management" Award Recipients will Be Honored Tuesday, September 11th.



Finalists in each of the following categories are:

Data Center Management, IT Operations & Business Continuity

Network Management

Security, Compliance and Risk Management

Servers and Virtualization

Storage and ILM

Thank you to our "Best Practices in Infrastructure Management" Judges for IMW 2007:

RETWEEN THE LINES

SECURITY

Firm Sued Over **Breach of Data** On 8.5M People



CALIFORNIA LAW firm has filed a classaction suit charging Fidelity National Information Services (FIS) and one of its subsidiaries with negligence in connection with a data breach that exposed personal data of as many as 8.5 million people.

The lawsuit, filed in federal court in California, also accuses the Jacksonville. Fla -hased transaction processor and outsourcer and its Certegy Check Services subsidiary of invasion of privacy and breach of implied contract

The suit does not seek specific damages.

The complaint was filed by San Francisco-based Girard Gibbs LLP on behalf of the 8.5 million consumers.

A spokesman for FIS and Certegy, which provides check-verification services to retail firms, did not respond to a request for comment on the suit.

Fidelity National, which is not affiliated with wellknown financial firm Fidelity Investments, disclosed last month that a Certegy senior database administrator had illegally accessed and downloaded millions of consumer records and then sold them to data brokers.

The company first estimated that about 2.3 million records were affected but quickly boosted that number to 8.5 million in filings with the U.S. Securities and Exchange Commission

Eric Gibbs, an attorney at Girard Gibbs, contended that Fidelity National didn't notify consumers of the theft "in a timely and adequate manner." He also alleged that the companies failed to properly monitor and supervise the activities of employees entrusted with consumer data. - Jaikumar Vijayan



Global Dispatches

Infineon Buys LSI Unit for \$450M

the mobility products gr of LSI Corp. for \$450 in (U.S.) in cash, plus a possib additional \$50 million if the unit meets certain perfor-

LSI said the deal is part of ructuring following its n (U.S.) pur Agere Systems Inc. in Allen

Dan Nystodt, IDG News Service

Winro Sets Up Wi-Fi Test Lab

from the Wi-Fi Alliance to cre

e to run a Wi-Fi pre-

eed Wi-Fi Alliance said it cided to open its 12th wor on lab in India to better work with d

IDG News Service

BRIEFLY NOTED AGL Energy Ltd. in St. Lee ards, Australia, has signe







SECURITY

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- Iaikumar Viiavan



IBM acquired webconfer na service provider WebDialogs Inc. in Billerica Mass., for an undisclosed sum. WebDialogs will be part of IBM's Lotus division, and its software-as-a-service offerings will be part of the Sametime product line Infosys Technologies Ltd.

opened a business process

Monterrey, Mexico, that will employ up to 1,000 people within three years. The center will target the growing Latin American market. militants bombed computer

centers throughout Italy. calling them instruments of

Global Dispatches

Infineon Buys LSI Unit for \$450M NEUBIBERG, GERMANY - Infr

neon Technologies AG, based here, has agreed to purchase the mobility products group of LSI Corp. for \$450 million (U.S.) in cash, plus a possible additional \$50 million if the unit meets certain perfor-

ance goals. The mobility products unit of Milpitas, Calif.-based LSI ns semiconductors as software for cellular phone and chips for satellite digital

dio devices. Once the deal closes, 700 LSI workers will join Infineon's ess group, the co

signed intellectual property. transition services and supply LSI said the deal is part of a restructuring following its

\$4 billion (U.S.) purchase of Agere Systems Inc. in Allentown, Pa., earlier this year. Dan Nystedt. IDG News Service

Winro Sets Un Wi-Fi Test Lab BANGALORE, INDIA - Wipr

Ltd. was awarded a contract from the Wi-Fi Alliance to create an authorized test laboratory for certifying products as compliant with the Wi-Fi standard for high-speed wireless local-area networking.

Wipro, based here, will also ontinue to run a Wi-Fi pretification lab, sald Sanjay Seth, general manager for testing services and global a ances at Wipro Technol

in a statement, the Aus

based Wi-Fi Alliance said it decided to open its 12th worl wide certification lab in India to better work with development teams employed there by John Ribeiro

IDG News Service

BRIEFLY NOTED AGL Energy Ltd. in St. Lea ards, Australia, has signed a five-year, \$16 million Aus tralian (\$12.8 million U.S.) sourcing contract with Tata Consu Itancy Services Ltd. Mumbai, India-based Tata will manage and support AGL Energy's SAP software. Sandra Rossi,

Computerworld Australia



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System Center



Virtualization Increases IT Security Pressures

Emerging technology is making servers more vulnerable to hackers. **By Jaikumar Vijayan**

SECURITY

IRTUALIZATION technology, which allows multiple operating systems to run different applications on a single computer, has caught the attention of IT managers for its promise to let them better manage and utilize corporate IT resources.

However, some IT managers and security researchers warn that the emerging technology also makes corporate systems far more vulnerable to hackers.

vunnerable to hackers.
Chad Lorenc, information security officer at a
financial services company that he asked not be
named, said that IT security and compliance projects are far more complex
undertakings on virtual
machines than on servers
that run a single operating
system and application.

"It is a very complex issue. I'm not sure you are going to find a single solution" for addressing security concerns in a virtual environment. Lorenc said.

environment, Lorenc said.
"There is no silver bullet," he added. "You have
to tackle [security] from a
people, process and technology standpoint."

Virtualization technologies allow companies to carve out multiple virtual machines within a single physical resource such as a computer server or storage array.

The technology allows companies to consolidate applications running on multiple systems into a single server, which promises to ease management requirements and allow IT hardware resources to be better utilized. Analysts note that al-

Analysts note that although the technology has been around for several years, IT organizations have become more interested in recent months as virtualization products have emerged from the research labs of companies such as Intel Corp., Advanced Micro Devices Inc., VMware Inc., Microsoft Corp. and IBM.

Corp. and IBM.

But before IT managers
turn to virtualization tools,
they must understand that
collapsing multiple servers into a single box does
not change their security
requirements, said George
Gerchow, technology strategist at security vendor
Configuresoff inc.'s Center
for Policy & Compliance in
Colorado Springs.

TAKING PRECAUTIONS

In fact, Gerchow said, each virtualized server separately faces the same threats as a traditional single server. "If a host is vulnerable, all associated guest virtual machines and the business applications on those virtual machines are also at risk." he said.

Therefore, a server running virtual machines faces more danger from a single exploit than a standalone physical server, he explained.

expanies. He noted that virtualization software allows developers, quality assurance groups and other corporate users to set up virtual machines with relatively little effort — and without IT oversight. Such virtual machines can pop up, move across systems or disappear entirely on an almost constant basis if IT managers don't take measures to maintain control of each of them.

"IT departments are often unprepared for the complexity associated with understanding what

Continued on page 16



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Empowered by Innovation



Continued from page 14 virtual machines exist fon servers] and which are active or inactive," Gerchow said. Without the ability to keep track of virtual machines, companies are often unable to patch flaws or update systems when neces-

sary, he added.

"When you have a virtual environment, (users) tend to start piling on the virtual servers," Lorene said. The combined value of the assets can get "very high very

quickly," he noted.

Even if IT staffers do keep track of all the virtual machines running on a server, they can still face problems

Many network admission control technologies that are making 'go' and 'no go' decisions don't know if a [server] is a virtual machine or not.

RITY OFFICER, BT RADIANZ

installing patches or taking systems offline to perform routine security upgrades, Gerchow said. The risks associated with

The risks associated with patching holes and upgrading applications increases each time a new virtual machine is added to a server, he added

Lorenc suggested that companies install tools that can quickly detect and discover virtual machines as they are installed on a corporate server. He also advised that companies create strong policies to control the spread of virtual machines.

And, he said, it's important that IT managers have a good understanding of the business import of every application running within a company's virtual environment and that they map out any interdependencies that may exist among them.

He added that companies should set up separate patching processes for virtual machines and create strict change-management policies and controls to restrict access to the virtual

environment.

"We are in the process of trying to mature some practices in this area ourselves through process, change controls and through tech-

nology." Lorene said.
Lloyd Hession, chief security officer at BT Radianz in
New York, said that virtualization also opens up a slew
of potential network access
control issues. He noted
that the technology allows
multiple application servers
with different access requirements to run on a host
with a single IP address.

Therefore, he said, IT managers should take proper access-control measures to ensure that a network admission control policy for one virtual server on a host doesn't get applied to all the virtual servers on a corporate network

Today, most networks
"are not virtualizationaware," he said. "Many
network admission control
technologies that are making 'go' and 'no go' decisions
don't know if a [server] is a
virtual machine or not."

Security experts also noted that expanded use of virtualization tools from major vendors is giving hackers and "white hat" seccurity researchers a stack of relatively unexplored code in which to look for security flaws and attack methods. Just this month, Microsoff issued a natch to fix a vulnerability in its virtualization software that it said could let users access operating systems and applications without authorization. Microsoft rated the flaw "important" rather than

"critical."
Security experts said that
more such vulnerabilities
are likely to appear in packaged software as the use of
virtualization technologies
continues to spread.

POSSIBLE WEAKNESS

Kris Lamb, director of the X-Force team in IBM's Internet Security Systems unit, cited virtual machine monitoring tools, which manage virtualization functions in a system, as a strong potential platform for launchinghacker attacks on virtual machines.

Virtual machine monitors use consoles to manage the resources of the hardware hosting the virtual machines and to act as an interface between the hardware and the various virtual machines hosted on it.

The monitoring software usually sits just one level above the hardware and ean be used to launch virtually undetectable attacks against the operating system and application layers above it, according to security experts.

In fact, security researchers have said that they have already demonstrated proof-of-concept code that shows just how attacks on virtual machines can be carried out from the monitoring software.

For example, researchers at Microsoft and the University of Michigan earlier this year devised SubVirt, which uses a a rootkit to install a virtual machine monitor under an operating system. The effort allowed the re-

SECURITY FIXES

Ensuring the security of virtualized systems requires the ability to do the following:

Detect virtual machines, and know whether they are active, at any time. Keep track of where virtual machines are residing.

Determine that the business-critical functions are supported by each virtual machine.

Track virtual machines as they move from host to host. Map the relationships between virtual machines and host systems.

and host systems.

Group virtual machines by application and importance.

searchers to gain complete

machines.
A similar attack method, called Blue Pill, was developed by Joanne Rutkowska, a malware researcher at Singapore-based IT security firm Coseine who demonstrated it at the Black Hat security conference in Las

Vegas earlier this month. Rutkowská's rroukit is based on AMD's secure virtual machine, eode-named Pacifica. It allows a virtualized system to be hijacked much like with the SubVirt attack method, while remaining completely unde-

tectable to IT personnel.
"You have this big
command-and-control
Imonitoring] software that
has become a central piece
of the infrastructure, [lt]
holds the keys to the kingdom" at many companies,
Lamb said.

For hackers, such software provides an increasingly high-impact target to go after, he added.



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IT SERVICES AND SOFTWARE ENTERPRISE NETWORKING AND COMPUTING SEMICONDUCTORS IMAGING AND DISPLAYS

IT Skills No Longer Sufficient for Data Center Execs

Companies must find the right mix of IT, facilities and security expertise.

By Sandra Gittlen

OMPANIES ARE facing increasing difficulty in their efforts to find qualified data center managers, since the required skills have expanded beyond IT expertise to a mix of IT, facilities and security management abilities.

"Traditionally, data center managers did focus on IT," said Jill Eckhaus, CEO of AFCOM, an Orange, Calif.-based professional association for data center

managers.
"Today, they do so much
more," she said. "With companies running out of data
center space and encountering power and cooling
issues, it's extremely important for data center leaders
to be educated in other areas, such as facilities."

Eckhaus said last week that AFCOM estimates that "by 2015, the talent pool of qualified senior-level technical and management data center professionals will shrink by 45%."

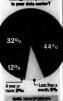
She noted that an AFCOM survey completed last year found that nearly 40% of its members reported having unfilled data center positions, and that 15% said "it takes them six months or longer to fill open seniorlevel technical or management positions."

ment positions.

Neal Smith, data center
manager for core services
at Intel Corp.'s Oregon data
center operations, said the
results are not surprising.

"The data center is where everything comes together networking, facilities, business units, security and storage," he said. "You have to understand all these moving parts."

How much time does it usually take to full open sealer-level technical or management positions in your data center?



In addition, the mounting pressures of compliance with regulatory mandates, energy constraints and finding locations for expansion are often falling on the data center manager's shoulders, Smith noted.

"Senior management will not stand for fingerpointing between facilities and systems," said John
Oyhagaray, vice president of programs at 7x24 Exchange International in New York, a knowledge exchange for
those who design, build, use and maintain information
infrastructures. "There is
no room for a escregation or room for a escregation."

mind-set. In the data center, everyone is responsible for system uptime. "The best thing an IT manager can do is to learn a little something in each of the areas they know nothing about and develon a base."

knowledge." he added.
For example, Smith said
that power concerns and the
move toward eco-friendly
computing makes some
knowledge of electrical systems and heating, ventilation
and air conditioning a must
for data center workers.

"The density of computing has gone up tremendously because of technologies like blade servers," Smith said. "That has all sorts of implications on your overall data center power

and cooling."

Smith noted that he has gained knowledge of facili-

The data center is where everything comes together – networking, facilities, business units, security and storage. You have to understand all these moving parts.

NEAL SMITH, DATA
CENTER MANAGER FOR

NEAL SMITH, DATA CENTER MANAGER FOR CORE SERVICES, INTEL CORP'S OREGON DATA CENTER OPERATIONS

ties chores by working with experts during his 15 years on the job. "I'd buddy up with the facilities team; that's where I gained most of my knowledge," he said.

Tim Mills, data center manager at Cardinal Health Inc., said he learned facilities skills during a recent data center upgrade from a Tier I electrical architecture with many single points of failure to a Tier 4 dual-bus

infrastructure.

"While I don't have to
understand the details, I do
have to understand the major components and know
how to react if we have an

issue," he said.

Doug Lauterbach, data center director at BayCare Health System in Clearwater, Fla., suggested that data center managers should also learn process management skills, which will become very important as companies turn to utility

computing.

Lauterbach also believes that data center managers should study up on eco-friendly computing.

rriendly computing.
"We have extreme environmental pressures, and I
have had to educate myself on
what it means to be a 'green'
data center," he noted. "Tm
trying to lower the ceiling of
power consumption."

Streen is a freedance writer
near Boston.



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On the Mark



Juice Apps, Not the WAN

F FHE bane of your existence is workers in remote offices complaining that the network is dow, you might be empted to look at WAN acceleration technology. But the folks at Certeon Inc. in Burlington, Mass., argue that speeding up your applications makes more sense. Gareth Taube, vice president of worldwide marketing, explains that his company's 5-Series appliances perform standard WAN acceleration through techniques like compression and quality-of-service priority routing, But the devices also contain "blueprints" of numerous prackage applications, such as Microsoft Office and Documentum, that

make it possible to send only new data, not every bit in the program. Certeon's goal "is to never send the code. According to Shawn Cooney, Certeon's director of research, a new service-level agreement auditing function will be added in the next

quarter as well. With it, you'll be able to show the remote office managers exactly how much Certeon has juiced your applications. Although the SLA tool listelf won't make things go faster, "it helps with the finger-pointing." Cooper yasy 4fily.

R Certeon says its S-Series appliances not only perform standard WAN acceleration, but also minimize resending of data.

same data twice," Taube says. The central appliance in the data center knows which applications and data each appliance in the field has received, so it passes along only new information. In Q4, Certeon will add support for SAP AG's applications, and by the end of the year, it will ship Blueprint Developer Kit so you can create blueprints of your custom

Desktops Top Web For Collaboration

The Internet can connect everyone, but ironically, it may not be the best way to deploy collaboration tools. That's what Barry Jinks, CEO of Vancouver, British Columbia-based Colligo Networks Inc., argues. He

acknowledges the importance of wikis and blogs for collaborative ventures but contends that end users have "context problems" when



they try to apply simple desktop features, such as drag-and-drop, to Web-based services. That can lead to productivity problems, Jinks calaims, which is what collaboration is intended to overcome. Plus. he

adds, IT managers

worry about security when workers are sharing sensitive information on the Web. Jinks suggests that the most effective collaboration software will bring Web 2.0 features to the rich-client world of Pox. That's the thinking that went into an upgrade of Collego for Shareford due by early 200-000 features to the rich-client world of Pox. That's the thinking that went into an upgrade of Collego for Shareford due by early 200-000 features are supported by the pox of the pox

Lock Down Endpoint Data in Vault

If you worry about what users at the edge of your network have stored on their PCs and laptops, consider Rocket Software Inc.'s forthcoming Enterprise Edition of its Rocket Security Vault. According to Jared Hunter, business unit executive at the Newton, Mass.-based vendor, the software gives you centralized management for up to tens of thousands of endpoints and can delete or recover protected data remotely should a device be lost or stolen. One nifty little feature is that Rocket Security Vault can prevent the equally nifty Google Desktop Search tool from indexing data, thus eliminating another security hole. Hunter says the software stores important information in a password-protected, 256-bit encrypted virtual hard drive, or lockbox, that appears as a separate letter drive to the operating system. The software will be available next month, with pricing starting at \$99 per seat. Microsoft Vista support is in the offing.



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■ THE GRILL

Whitfield Diffie

Sun's chief security officer talks about encryption, spies as data miners and the end of computer security as we know it.

Dossier

Name: Whitheld Diffie

Title: Vice president and Sun fellow; chief security officer Organization; Sun Micro-

systems Inc.
Location: Menio Park, Calif.

Favorite nonsecurity technology: "I like lots of them: cars, space travel, bioengineering. Clearly, the most exciting technology today is biological."

What he's reading right now:
"I'm reading a book called Colossus, because I'm reviewing it for the London Bathematical Society, It's about the group at Bistchhey Park that built the sort of groth-computer, a thing called Colossus, to attack some high-grade German crypto-systems, higher grade than Enigma, which we used between Berlin and the Army commands."

Favorite movies: "They're all ancient. I'm very fond of Casablanca and To Catch a Thief and Rear Window and The Big Sleep. I don't go to movies much these days."

Whitheld Diffie, a co-inventor of publickey encryption, is chief security officer at Sun Microsystems Inc. and co-author with Susan Landau of Privacy on the Line: The Politics of Wiretapping and Encryption (The MIT Press, 2007).

Why has public-key encryption been so important? Cryptography is the most flexible way we know of protecting communications in channels that we don't control. As we move a lot of value into the linternet and have Internet commerce and bagin buying and selling things, that is basically the only way of protecting either the transactions or — where the goods are intellectual property — the goods themselves.

Before public-key cryptography, in order to be able to use cryptography with somebody, you had to share a secret with them, which is kind of an intimate relationship for somebody you

Continued on page 26

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I think it's a very reasonable possibility that computer security as we talk about it today will go away

Continued from page 24 might never have met before. Publickey cryptography relaxed all of that and made it much easier to manage keys in a very diverse environment like Internet commerce, as opposed to the more traditional large but rather unified environments like the Department of Defense.

completely.

Why do you think that more e-mails aren ng encryption or digital signatures? I think it has to do with the difficulty of the key management. The key point is that cryptography has somehow not gotten itself tucked into the inner loop of

development in these things. You really have to be a fan to be able to do it with your e-mail, and then you can really only do it with other people who are fans. So far, it's remained a niche market.

What's the difference between internet nunications and phone communications for cryptography and privacy? The key managerial virtue of cryptography is that it separates security from the medium of transmission of the message. Once the message has been encrypted, it doesn't matter how you send it - whether you send it by an optical fiber, which is already fairly secure, or you send it by digitizing it and putting it onto the Internet, or whether you send it by satellite.

Are either government or corporate policies on data retention and data mining having important effects on privacy or security? Yes. They're very good for our sales of storage.

Information is very much like oil and gold and a lot other things. Once we got what was there readily bubbling up on the surface, then we mined out the original resources and we developed better technology, and now we can work gold seams that are a tiny fraction of what would have been

worked in the boom of the 1850s. Intelligence and data flows are very much the same thing. If you look at World War II intelligence, it really is a matter of picking plums. The reason they concentrated on the cryptography of the time is that they were able to find, so to speak, the channels with the best information in them. Those channels had some kind of protection in them, and once [cryptographers] got through the protection, they had very good information handed to them on a plate.

If you look at circumstances facing real-world spies today, they have things available to them and other things they might want that aren't available to them. If they can do more processing on the things that are available to them, they may be able to get very good information they couldn't have gotten some time ago because they didn't have the techniques and the computing power. And so data mining is just going to become more and more a fact of life.

What will be the most significant chang to security technologies in the next decade? Secure computing environments are probably the thing in which I see the nath to growth. The cutting edge of information security has largely to do with what amount to censorship processes. Some is censorship outright in the sense that corporations don't want their employees wagering on the horses or looking at erotic pictures on the Web. Others are censorship of a less confrontational kind, because almost nobody wants to receive spam. If you could sharpen up your filters so that you censored out all of the spam and nothing else, you'd be very pleased.

However, in information security, we missed the most important things of the last 10, 15, 20 years, Viruses, worms and spam, in particular, were not things that we exactly foresaw and not things that we dealt with ahead of the curve. I think it's a very reasonable possi-

bility that computer security as we talk about it today will go away completely. If you say you're computing something securely today, you mean that you're doing it on your own computers and you've protected them however you consider it necessary. The major trend in computing is outsourcing. I've been predicting since at least 1980 that any real corporate computation is going

O MORE ONLI

to mostly occur on somebody else's computers. I think, as a practical matter, that will be what will dominate our understanding of security in computing and information security in general in the next decade.

What do you foresee in 100 years? I would predict that the notion of "person" as we have it now is going to go away - that the merger between people and computers, between biology and computational phenomena, is going to happen much, much faster

than people normally think. Thirty years ago, I thought there were going to be designed human beings by the end of the 21st century, and now I think it's by the end of the first quarter.

- Interview by Joyce Carpent

Michael Gartenberg

Flashy vs. What Really Works

H, IT WAS SO SEDUCTIVE, the way Apple's early iPhone ads built anticipation for the device by trumpeting the arrival of the "real" Internet on a cell phone. Nokia has headed in the same direction, with a full HTML browser on its N series of phones. As someone who spends a lot of time using all sorts of mobile devices, I think it might be time to step on the brakes. Is it really the best approach to give us the "real" Net on a mobile device?

I've noticed something about technology that I will grossly oversimplify by presenting two extremes. Stuff that wows people in a product demonstration often ends up being difficult to use effectively in the real world, and stuff that elicits yawns sometimes works great day to day.

Sadly, in our industry, the demos that wow are praised and the rest are ignored. Marketers have an incentive to include the wow factor at the expense of usability, since reviewers respond to flash and have less interest in digging into the real issues that real people will encounter in the real world. In the case of mobile

In the case of moone
Internet experiences,
the sad state of most approaches makes us all the
more susceptible to the
superficial glitz of getting

a full desktoplike HTML experience on a mobile device. But do we really have to choose between a stripped-down version of the desktop experience and the false promise of the real thing? Clearly, there's a need for something more thing.

Consider the everyday

situation of trying to read a newspaper online while on the go. On a device like a BlackBerry, enter the Web address http://mobile. nytimes.com. Spend some time there, and read some of the articles. Next, using a device like an iPhone that has a full HTMI. browser, go to the full-bore NYTimes.com site. Again, VYTimes.com site. Again.

■ The 'real' Internet on a phone? It sounds so seductive. get the full experience. Finally, on either device, enter the URL www.

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spend a lot of time clicking

through to the end. NYTimesriver.com, on the other hand, presents things in a nonflashy way, but notice how easy it is to scroll through that "river of news." Click on an article, and it shows up in its entirety, no clickthrough needed. Every screen on the site is formatted for mohile devices, so you don't have to scroll in several directions to see what's there. NYTimesriver.com represents the third way.



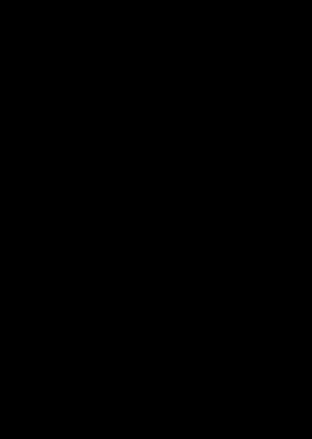
Now, why is NYTimesriver.com so much better than Mobile.nytimes.com? For one thing, it was developed by a guy named Dave Winer who just wanted to read The New York Times on the go and found the newspaper's official approach lacking. He had the skills to go the Times one better (oh, how I wish I could do that sort of thing), and he was a user who knew what would make the user experience better. Does anyone who developed the Times' application ever read the Times on a mobile device? It's hard to imagine.

We need mobile options that are truly optimized for the devices we use. I remember that in high school chemistry, we took Compound A and combined it with Compound B to create something brand-new that was neither A nor B. That's called synthesis, and it's what we need for our mobile devices. What we have today is symbiosis, two things that don't quite mesh. As corporate applications increasingly are mobileenabled, the difference is something for IT departments to think about. Michael Cartenberg is vice president and research director for the personal technology and access and custom research groups at JuniterResearch in New York, Contact him at mgartenberg@optonline. net. His weblog and RSS feed are at http://weblogs. iupiterresearch.com/ analysts/gartenberg.

Backup tapes, hot sites, annual tests the elements of yesterday's disaster recovery planning may lead to a dead end today.







H. THE GOOD OLD DAYS. Planning for disaster recovery, if it occurred at ail, was one of the easier things an IT manager had to do. You'd back up your mainframe to tape every night or over the weekend. If you were really conscientious. you'd send the tapes off-site and arrange for

contingency processing at some other data center. Testing your recovery plan? You'd retrieve the tapes and see if you could read them. Of course, things have gotten steadily more complicated

over the years, with distributed and networked computers, n-tier computing, heterogeneous hard ware and operating systems, virtualization, aut mated data feeds from external parties and more.

Adding to the confusion has been a steady

change in the meaning of "disaster." Ten years ago, a fourhour outage might not have even been noticed by users or customers; today, it could cost you your job.

As a result, it has become vastly more difficult to prepare and test disaster recovery plans, and increasingly unlikely that you will go to bed at night feeling 100% sure that all

your IT assets are protected. Companies are dealing with these challenges in various ways. Some are reaching out to external parties for help with disaster recovery planning and hot sites, to which con puter processing can be moved quickly in an emergency. Others have pulled back from these arrangements, saying they can better handle the complexity of disaster recovery in-house. Still others are essentially redefining disaster re-

covery by substituting notions of "disaster avoidance." lerry Grochow, CIO at MIT, illustrates the problem this

way: "I once counted a dozen different boxes that had to be up for [an application] to work from end to end. and that's not unusual. So you ask your SAP application programmer, 'What's necessary to recover your system?' and you don't necessarily get the full picture, because the programmer doesn't





recovery as we

JERRY GROCHOW, CIO, MIT

knew it is changing.

realize that the authentication server needs to be running so someone can even log on, and it's running in a different data center."

Not only are an organivation's IT assets no longer all located in a cozy glass room with a raised floor. they may not even he under the control of the IT department. Grochow recalls an earlier job at a brokerage firm that got automated data feeds from 40 external suppliers, noting that some financial institutions have 100 such connections. "How to recover a major data processing application when you have that many feeds is extremely complicated," he says.

The challenges are legion. Schneider National Inc. in Green Bay, Wis., at one time contracted with a service provider for a disaster recovery hot site but recently decided to set up its own second data center to serve as a recovery facility. "Ours is a very complex and highly integrated technology environment," says Paul Mueller, vice president of technology services at the trucking company, which has 36 locations in North America. "As complexity has increased, so has the difficulty associated with hot-site recovery."

It proved difficult to accurately replicate Schneider's operating environment at the external facility, Mueller says, and so his semiannual disaster recovery tests were never completely satisfactory. "Invariably, we encountered issues when we executed those tests, such as tapes not being correct," he says, "Our ability to restore was problematic based on the hardware configurations, operating system configurations and so on."

Mueller says he is much more comfortable with his new arrangement, but it came at a stiff price. Schneider's two data centers are connected with redundant fiber-optic cables, redundant telephone systems and dual mainframe backing each other up. "We have invested heavily based on the risk to the enterprise and to the supply chains that we help our customers manage," he says. "But we felt this investment was absolutely the right way to go.

And the investment was not just in facilities. With the help of a consultant, Mueller's staff interviewed 70 business managers and a few key customers. The interviews gleaned estimates of the losses that would result from various types and durations of outages, as well as managers' recovery-time goals.

"When you have that information consolidated into an assessment document and you get to see the aggregate impact to the business of losing your data center, it becomes a very compelling story," Mueller says.

Bob Dowd, CIO at Sonora Quest Laboratories LLC in Tempe, Ariz, says his company can't afford a fully redun-

THE OUTSOURCING OPTION

There is a trend among large companies to bring disa recovery in-house after having out recent report from Bartner Inc. Here are some of the reasons:

A desire to tighten recovery-time windows to 24 hours - and often to less than four hours, which vendors quote at prices that make customers cringe.

■ The distance of recovery sites from the customer's data center. They're often too far, making the transport of tapes and personnel costly and slow.

Inflexible, long-term contracts of three to five years, which may exceed the customer's planning horizon.

w inflexible testing options and environments.

But before giving up on service providers, Gartner advises companies to consider that the vendors may have far greater nel, equipment, power and process-

ing redundancy, and disaster recovery expertise. - BARY ANTHES

dant hot site for disaster recovery, but he has taken other steps aimed at avoiding a disaster. Sonora Quest runs medical tests for 20,000 patients every night and gets the results to doctors hy early the next morning, so it's not hard to imagine the effect that a prolonged outage in its highly automated processes would have on the business



"We have hardened the computer room and built in all kinds of redundancy, so if one node fails, we have immediate fail-over to another node," Dowd says. The Tempe data center has redundant disks, two network cores and no single points of failure. Plus, it does two backups a day, one to a server and

Still, Dowd worries about the data center, which sits near the end of a runway at the Phoenix airport. He'd like the safety of a remote backup facility, and he has an idea for getting one on the cheap.

Part of the Tempe data center is devoted to serving as a test environment for the labs' systems - effectively a scaled-down duplicate of the production environment. If that were moved to Sonora Quest's lab in Tucson, Ariz., it could be used as a backup for Tempe, Dowd reasons. "We'd be using it to save the business, not necessarily doing upgrades," he explains.

VIRTUAL HEADACHES

Rod Flory, CIO at Lennox International Inc. in Richardson Texas, says the heating and cooling system company has been rolling out server virtualization software to increase the efficiency and flexibility of its servers. But that has complicated disaster recovery planning, he says.

"With VMware, we are changing our server platforms more frequently - not adding servers, but changing mem-

Continued on page 32



_INFRASTRUCTURE LOG

DAY 62: Everyone's completely overwhelmed by their desktops. People keep flipping between bronser windows The in-boxes ere overflowing. So many applications. All the user interfaces are different. How is amyone supposed to collaborate when they're flooded with all this stuff? This is so frustrating. We need to get our heads doorwe mater.

_Gil has grown gills just so he can stay on e-mail langer. Help.

VaContrarian-



"TVE BEEN IN IT FOR 33 YEARS, and I don't believe disaster recovery is getting harder at all," says flow Hamilton, CIO of health insurance provider United Health Group International Inc. in Minneapolis.

Middle he actimusculoses that

company to company, Hami

A huge drop in the cost of communic tions. "Thirty-three years ago, there w no internet, and the cost of connecting two sites was wildly exorbitant," says

two sites was wildy exorbitant," says Hamilton. "Now, real-time backup to a remote site is economically feasible."

Business process outsourcing and of shoring. "In order to offshore a process you have to make it portable, and as soo as you make it portable, it's easier to

Well-based applications. The move to the Web also has increased application to the Web also has increased application probability, because sever as well as a developers can access applications from anywhere via the Internet. An operation was frequently shart down during harrisms threat, Hamilton says, but it can now renain open processes selfers can work from home. "It's porting because selfers can work from home. "It's porting because selfers can work from home."

able, with redirects, to move the back and somewhere and users on the Internet are none the viser," he aspx. And he says moving to Web services eases the burde of supporting and recovering dealtop systems, because Web portals can deliver functionality to clients without

The send treaget in main deconomies, income as application deployment, with traditional mainframe systems requiring support at the center but virtually some at the deaths, through clearly-are, with elaborate needs to manage software at each deaths), butch full circle to the who, "flamithm says." I view Whit schoology as a return to the good old days, from a management perspective."

—BASY ARTHERS.

Continued from page 30 ory, the number of CPUs in them and so on," Flory says. "So quarter to quarter, our environment looks different, and keeping up with that on the hot site is a challenge."

Flory says he tests his disaster recovery plan "religiously" once a year, and it's not a trivial effort. "It's a project," he says. "I take five people and set them seide for a few weeks" You look at situations like the bird flu. You are counting on five or six people who know how to execute the plan, but what if they are not available?

INTERNATIONAL INC.

aside for a few weeks."

The tests run smoothly enough, Flory says, but he's considering involving a disaster recovery firm in a future test.
"You look at situations like the hird flu. You are counting on five or six people who know how to execute the plan, but what if they are not available?" he says. "Can your plan he scripted well enough that you could hire a consulting group,

give them the book and say, 'Here, execute the plan?'
And there's another improvement Flory wants to make.
Traditionally, Lennox's systems have been centralized at
company headquarters, but more recently, functions such as
e-mail and computer-aided design have been pushed out to
servers at manufacturing sites where there are no disaster

recovery capabilities.

But including those remote sites in the centralized plan is not simple because they don't have standard systems at the sites. "We are dealing with a legacy of autonomous decision-making," Flory says. "We may have Dell servers at one facility and IBM at the next. So you look at 15 to 20 major facilities, and you realize you don't have a common architecture."

He says Lennox will try to move the remote sites to a more common architecture — so the central data center can serve as a hot site for them — but that could take years.

Meanwhile, MIT is supplementing its two on-campus data centers with two additional leaded facilities — one a few miles away and the other "namy, many" miles away, say Grochow. But these will not be reflational disaster-recovery sites. All four will be in use all the time, with each content in the content

With this setup, the difficulty of testing a disaster recovery plan almost disaspears. Because every site is running all the time, and because each critical application is running in more than one place, the plan is essentially tested every day, Grochow says. The idea is to always be in a 'fall-soft mode. If you have an architecture that allows certain things explains. Thut if your architecture has lots of single points or failure, you have to have a very destiled recovery plan.

"The concept of disaster recovery as we knew it is changing," Grochow says. "I think we have gotten past the point where you can rely on a third party to provide hot-site recovery, because it has gotten too complicated."



Take back control of the desktops with IBM Lotus' Notes' and Lotus' Domino' 8.

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Retooling California's Energy Market

IT is supporting a total revamp that's designed to provide predictability and pricing transparency. By Thomas Hoffman

HE CALIFORNIA Independent System Operator (ISO) is in the midst of a \$189 million effort that will enable it to completely redesign energy markets for the

state. The Market Redesign and Technology Upgrade (MRTU) initiative, which began in earnest in 2005, is scheduled to go into effect next February. It involves replacing most of the computer systems that have operated the California energy market since 1998, and more than hall of the project spending is IT-related. The goal is to bring pre-

spending is IT-related.

The goal is to bring predictability and transparency to an energy market that has been short on both.

In the old market structure, the state was divided into three broad regions for the purposes of buying and selling power. That structure didn't provide a good picture of supply and demand, says Steve Berberich, who has been CIO at the not-for-profit ISO since coming over from TXU Corp. in November 2005.

To improve the market's ricing structure, Folsomhased California ISO has decided to move in a direction similar to that of its counterparts in Texas, New York and New England by shifting to nodal pricing, also called locational marginal pricing. Under that model, California ISO will determine the cost of electricity by monitoring power available across 3,000 nodes located on substations, transformers and other equipment stretched along 25,000 circuit miles of transmission lines around the state. Nodal pricing will provide much more trans-

parency to power producers

than relying on just three



The more certainty you have, the more it tends to drive prices

CHUCK KING, VICE PRESIDENT OF MARKET DEVELOPMENT AND PROGRAM MANAGEMENT, CALIFORNIA ISO

pricing zones. Data from the nodes will be transmitted to a scheduling interface and business rules system being developed by Siemens Power Transmission and Distribution Systems Inc. in Raleigh, N.C. That system will analyze power transmission schedules from the previous day throughout the state, combine that data with current usage figures and use an optimization algorithm to determine the next day's pricing.

"We're trying to optimize the flow of power and allocate costs accordingly," says Berberich. He hopes the new approach "will help us to avoid bottlenecks across the grids much further in advance" than by monitor-



We're trying to optimize the flow
of power and
allocate costs
accordingly.
STEVE BERBERICH.
CO CALEDRIALSO

ing only in near real time as is currently done.

The shift to nodal pricing is much more transparent to the market," says Chuck King, vice president of market development and program management at California ISO. With greater price transparency and the resulting greater certainty on pricing, power companies can hedge their generation and transmission costs more effectively, "The more certainty you have, the more it tends to drive prices down," says King.

down," says King.

Although King says

California ISO has not conducted a detailed returnon-investment analysis on the MRTU project, "we do expect to see a significant reduction" in out-of-market costs. he says.

That means reducing the amount of electricity that California ISO has to purchase from power companies outside of the state, says Debi LeVine, the organization's director of market services. These costs are distributed among all grid users and senerally are not 'hedge-

able," which drives prices up. CUSTOMERS WIN

CUSTOBLERS WIN

Providing power companies with greater visibility
providing power companies with greater visibility
on pricing and improved
forecasting with day-ahead
planning could also reduce
costs for consumers, says
Frank Wolak, a Suanford
University economist who
take the providence of the providence
as lose charitant of an independent market surveillance
committee for California
ISO. "We hope to slowly
transparency] to customers'
shills" he gavs,

California ISO is also building a scalable settlement and billing system that's being designed to grow with the state's energy

BACK TO THE FUTURE

WHEN THE quasi-governmental California Power Exchange went bankrupt during the state's 2001 energy crisis, California lost its day-ahead energy market.

Before that, a software system predicted how muc energy the state needed for each day based on the weather forecast and other criteria. When the Califo Power Exchange existed. it used that data to operate a day-ahead market that delivered most of the energy ded for the next day to the California ISO in the form of hour-by-hour energ schedules. California ISO uld then monitor the act al flow of the energy schoduled, and, if needed, adju unt of electricity

required from generators at the most economical cost possible to meet customer demand while allowing sufficient reserves for centin-

The absence of the dayshand market requires California ISO to balance supply and denand in real time — a much more difficult proposition, since without days shared schedules, it can't identify potential overloads shared schedules, it can't identify potential overloads on the grid and act to allowists them. That can result in ionification use of transmission lines and generators, leading to higher costs. Among other things, the market refedings effort will enable the ISO to return to

day-shead scheduling.
- THOMAS HOFFMAN

needs, says King. The previous Unix-based system is being replaced by one Parisbased Areva is building that will run on Sun servers.

Despite the huge technology component, the biggest challenge of this project isn't the technical difficulty of gathering and crunching data from 3,000 nodes. That's already been figured out by vendors and IT staffers who have done similar work at ISOs in New York, New England and Texas. The hard part for Berberich and other project team mem-

bers is to determine how the market should work. California ISO is doing that by drawing input from power companies, regula-

that by drawing input from power companies, regulators such as the Federal Energy Regulatory Commission and others, and using that data to define market rules for the vendors that are building the various support systems.

"We don't define the market rules in a vacuum," says Berberich. "We do it in concert with about 100 market participants — generators, traders, load-serving participants and utilities."

pants and utilities."
This broad stakeholder
input is essential, Wolak
says, because California gets
about 25% of its electricity
from other states, and onethird of the electricity consumed in California is generated by hydroelectric dams.

"Cal ISO does an outstanding job of taking stakeholder input and designing something that works for them." he says.

And that's no simple accomplishment, considering the complexity of running an energy market. "You have to balance supply and demand every second," Wolak says. "If you don't, the lights go out."





INFRASTRUCTURE LOG

DAY 79: This is out of control! Our IT environment is rigid and inflexible. Our business needs are changing, but our environment isn't built to change with them. We can't adapt. On, no...I was afraid of this. We're so rigid we're stuck in time.

_Infrastructurus prehistoricus. I've read about this.

_DMY 88: I'm taking back control with IBM SOA solutions. Now we can align business goals with our IT. We have the hardware, software and services we need to respond to change. Strategy, planning and implementation are in tune with our specific business needs. Now we can deploy and update business processes faster and more efficiently.

_Goodbye, rigid past. Hello, flexible future.

Take the SOA business value assessment at: IBM,COM/TAKEBACKCONTROL/SOA

Security Crashes Into Productivity

Our manager didn't tell users that they could have laptops, but she's the one who has to tell them that they can't.

ECURITY CAN sometimes come crashing up against productivity, and when it does, security must prevail. That's because my state agency is a maintainer of records covered by HIPAA rules. One blunder. and we're front-page news. Not on my watch, thanks.

Given the consequences of jeopardizing client data, I think my obsession with security is good for the agency. But for our users, it can seem as if we're living in the Dark Ages, Many technologies that are commonplace in the corporate world and even in other government agencies haven't won my approval yet, and they won't until I am thoroughly convinced that they won't undermine our security efforts.

Still, things can slip through, since determined users don't always go through proper channels. When that happens, I have the unenviable job of rolling back the technological timeline for the wayward users. They thought it was the 21st century - ha! Get back to the Dark Ages with the rest of us.

So it was that I had to tell our agency's program manager that the four productivity-enhancing laptops with Wi-Fi that his group was using were leaving us vulnerable to a serious breach. Sorry, but the Wi-Fi capability is going to have to be disabled, the laptops configured with our standard image and the hard drives encrypted. Users can check out a laptop when needed. Otherwise, the laptops stay put, connected directly to the network so they can be natched and updated. No

working at home for them. Naturally, this put a kink in his plan. "What good are laptops if we can't go wireless, work on the road and work at home?" he asked. He had transferred from another agency, where he had carried a laptop. I explained that we have different security constraints and since we don't yet have

■ Would employees share what I auess vou would have to call my obsessive level of caution?

a foolproof way of securing mobile devices, we don't want to put our data at risk. We allowed laptops

until last year, when one news story after another told about laptops that had gone missing. They often held data such as patients' names and Social Security numbers. The case of the missing Veterans Administration laptop alone was enough to curl your hair if you're in charge of securing similar information.

THE LUCKY FEW Now, only systems admin-

istrators and a few chiefs trained in laptop security have laptops. Even then, they can't synchronize their My Documents folders from the network drive to the laptop, Protected data remains within the protected network.

I am one of those people with a laptop, and I take it everywhere. But I am extremely cautious. I never use Wi-Fi. Instead, I have a broadband wireless card. which eliminates the risk of a hacker sniffing my wireless traffic or hijacking my wireless session. My laptop has host-based intrusion prevention and

Trouble Ticket

AT ISSUE: A department is letting some staffers use wireless laptops. ACTION PLAN: Pull the back, explain why, and net on the stick to address curity concerns.

a firewall, and it is set up for automatic patches and updates.

When I travel, my eyes never leave my laptop. At airports, I have a set order for putting my belongings on the conveyer belt so that when my laptop emerges, I am already at the other end to retrieve it. Even my purse is a lower priority. I use a small laptop case that slides under the seat - no overhead compartments. I try not to leave it in a hotel room. but if I must, I hang out a "Do Not Disturb" sign and put the laptop in the room safe. I refuse housekeeping services. Someone from the hotel could still enter my room, but I eliminate as much risk as possible.

Would our employees have this same level of - I guess you would have to call it - obsessive caution? Those news

headlines give me my answer. Luckily, the

agenda.

O JOIN IN program manag er didn't let his disappointment

blind him to the sincerity of my goals. I assured him that overcoming these security concerns is on our

This week's journal is written by a real security manager, "C.J. Kelly," whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com.

Outsourcing The Right W

Shared goals and good management are key. By Sean C. Barker



VERYONE KNOWS of a horror story related to outsourcing. As a result, many IT people seem to think of outsourcers as an axis of evil that should be eliminated or at least squeezed for every penny. But outsourcing, like any business relationship, is

more nuanced than that. Companies engaging in outsourcing relationships frequently make mistakes. They document processes poorly, ignore training, rush to implementation or focus only on savings. These errors result in a "your mess for less" approach in which the outsourcer moves your people, process and systems in whole or in part across to its company while figuring out a way to cut staff and provide the same service.

But there's a better way. The first thing to understand is that an outsourcer. just like your company, is in business to make money. Therefore, its priority is the same as yours. This isn't a bad thing; on the contrary, it's good. A profitable outsourcer is a healthy partner, and as a customer, you want a solid company to work with. Second, outsourcing can work out well or badly. depending on how well you

manage it. The five steps below are designed to guide you to a successful outsourcing experience.

MAINTAIN YOUR CONTROL. Don't make the mistake of ceding complete control of your infrastructure, applications or both to an outsourcer Companies that do this mistakenly assume that the outsourcer knows more than they do and therefore should be able to serve all of their needs better, faster and cheaper. Instead, keep or hire key people in each area to main tain control and guide and govern the outsourcer.

MEASURE, MEASURE, MEASURE. Implement metrics that are important to your business, such as performance level, number of incidents, development cycle times or speed to market. Assign staffers who understand the metrics to collect and benchmark them and then combine them to create context. Take, for example, number of incidents: The raw data doesn't tell you how those incidents affected production or whether a project was slowed because people who were needed to code an application were

resulting from the incident. MARRY THE PARTNER. An outsourcing relationship requires give and take. Even the best contracts include gray areas that can be interpreted in various ways. The deal must

redirected to solve problems

A savings-only focus Abdication of manage work for both companies, so mutual benefit is the goal. For example, look for ways to increase the outsourcer's revenue within its core competencies. If you can reasonably redirect dollars you're already spending toward the outsourcer, you'll likely get a better deal while helping to grow its business - a win for both sides.

TAKE RESPONSIBILITY FOR REQUIREMENTS. Incomplete or misunderstood requirements can send outsourcing over budget or completely over the edge. You know your business better than the outsourcer ever will, so it's up to you to gather requirements from your business perspective and explain them to the outsourcer. This will help ensure that your needs are well understood and documented, and it will help to educate the outsourcer about your business.

REVIEW REGULARLY. As you would with any internal department, review the status of both the operational infrastructure and the application development on a regular basis. Combine a monthly review with clear measures to in-

dicate progress or problems - with a quarterly review of the relationship. Some key measures are labor usage (capital vs. expense), project and budget status, ticket statistics, incidents with business impact and customer satisfaction.

Remember, an outsourcing deal, if managed correctly, can be good for all parties.

Barker is the vice president for worldwide operations at a global Fortune 100 company. Contact him at sean barker@yahoo.com.



Outsourcing The Right Way

Shared goals and good management are key. By Sean C. Barker



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its company while figuring out a way to cut staff and provide the same service. But there's a better way.

But there's a better way. The first thing to under stand is that an outsourcer, in business to make money, in business to make money, but the your the contrary, is good. A promable out sourcer is a bothly partner, and as a constouncy you want or with the partner, and as a constouncy you want with your contrary to work. With Second, outsource is well you can work out well or bull; takeput the well you manage? It manage? It manage it.

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> Your Mess for Less

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Barker is the vice prosident frees of the vice president goes at for two Box compane. Contact nim to scan batker a volume, ont.





_INFRASTRUCTURE LOG

_DAY 82: There are so many risks out there. So many things that can happen to our business: natural disasters, spikes in traffic, mergers. How do we prepare? One in three companies don't recover from unplanned downtime! Would we?

_Gil has wrapped everything in the office with bubble wrap. Everything. Just to be safe.

_DW 33: I'm preparing with IBM Business Resilience Solutions.
IBM Business Continuity Services can help us assess our risks and design a practive plan to deal with them. IBM Twidt gives us the visibility to diagnose and fits infrastructure problems. And the robust availability features of the IBM System p'' give us maximum uptine. The fluture feels so much sofer now.

_No mare bubble wrap. And I have to mail a package. Great.



Take the business continuity assessment at:
IBM.COM/TAKEBACKCONTROL/READY

Provisioning users can be maddeningly slow, but software can speed and sim-

plify the process. By Sue Hildreth

T THE Bryan-LGH Medical Center in Lincoln, Neb., computers are nearly as vital to patient care as beds and meds. The center's 3,500 physicians and employees rely on 170 applications to handle everything from registering patients and scheduling tests to ordering medical supplies and producing lab

to hospital operations. But until this year, the hospital's staff had to wait days - sometimes a week or more - to get access to new applications or to make changes to access rights for an existing application. And when a fresh crop of medical students arrived for internships, their wait to get online could be even longer. "It was a growing problem," says Rich Marreel,

had two and a half full-time employees dedicated to provisioning, and they were constantly behind."

That delay in provisioning users with their IDs and passwords sometimes drove frustrated users to borrow co-workers' IDs, which in turn created a potential security risk.

The IT department at BryanLGH had all of the symptoms of a chronic case of user provisioning overload. The prescription: provisioning software. User provisioning

software automates the process of creating, changing or deleting user accounts. It's part of the larger identity and access management market, which also includes products for single sign-on and authenti-

cation/authorization. Unlike single sign-on or authentication, account provisioning isn't a daily concern for users. But when employees need new accounts or changes in their existing account access, they really notice how long the process takes. And when they get tired of waiting, crankiness can lead to security lapses. Since BryanLGH began deploying Sentillion Inc.'s

plication in 2005, it has dramatically cut the time needed to equip new employees with accounts and passwords. In some cases, it now takes just minutes, says Marreel.

The system has also helped the hospital comply with the Health Insurance Portability and Accountability Act by providing reports and an auditable, consistent process for assigning access to patient data.

CONSISTENT RULES

In fact, regulations aimed at protecting consumer data are driving more companies to turn to automated provisioning. The Sarbanes-Oxley Act was one reason why Raymond James Financial Inc. in St. Petersburg. Fla., replaced its manual provisioning process with an automated one supported by SAP NetWeaver Identity Center (formerly Maxware Identity Center).

Identity Center "has allowed us to show auditors that we're following the same business rules all of the time," says Daryl Bilderbeck, senior applications security engineer at the investment and financial planning firm.

Continued on page 44



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Rules and Roles

USER PROVISIONING applications typically have workflow engines to assign accounts and apply corporate security rules. The customer must provide the appropriate workflow rules,

"You have to define what your workflow looks like and map it into the tool," explains Jay O'Donnell, president of Entryport, a systems integrator that will launch

its own provisioning product next month.

next month.

Customers must also create user access roles - categories of users with differing
security rights and restrictions. Workers are then assigned one or more of these
roles when provisioned with
application access

application access.

Creating these roles can
be a big challenge. It's
easy to create too many or
too few. "We did not want

4,000 roles for 12,000 employees," notes Denise Watson, system access roles analyst at Raymond James Financial. "Currently we

only have about 40 roles."
To get the right number of roles, Watson recommends a collaborative approach between IT and users. "We go into a department and ask what 80% of the people have in common in terms of IT access. Then we propose that as a role." she sarys.

"After that, it's a negotiation

- SUF HII DRETH

that require quick access to its 30 industry applications and databases. Railine used the customization features in Entrust Inc.'s GetAccess single sign-on and provisioning application to create a context-sensitive interface, so that each customer sees only the data pertaining to its own operations.

"Customers go to our Web site and create their user profile, ID and password," explains Rob Simora, assistant vice president for application development at Railine.

Simora notes that the company hasn't automated its internal provisioning because it uses only five or six Windows-based applications. "We're Microsoft-centric, with Active Directory, and there's not that

much for us to administer," says Simora.

In fact, only organizations with 2,500 users or more are likely to need user provisioning software, says Barry Runyon, an analyst at Gartner Inc. Other characteristics of a company that could benefit from provisioning technology include a heterogeneous IT environment, high turnover in the user base, and the need to comply with eneed to comply with

regulatory requirements.

Continued from page 42 Another benefit, is that it now takes just one day to provision new workers instead of two or three weeks, according to Denise Watson, system access roles analyst at Raymond James. "It's critical to have new financial advisers up and running immediately," she notes.

CUSTOMER ACCESS

CUSTOMER ACCESS
Some organizations need to
provision their customers
with application access. For
example, the H. Lee Moffitt
Cancer Center & Research
Institute needed to speed
up the registration process

for patients who wanted to participate in the center's online clinical surveys. To enable patients to selfregister via a Web portal, the cancer center deployed Courien Corp.'s Account-Courier application. Account/Courier automatically queries the hospital's patient surhorization for an account. No patient has to wait for a human employee to

sign him up.
"Our business requirement is to have a 24-by-7 ability for our patients to participate," explains Donald Wasylyna, H. Lee Moffitt's information security officer. "We wanted to make it as user-friendly and accessible as possible, because as soon as folks see any roadblock, they may decide not to participate."

Railinc Corp., a Cary, N.C.-based provider of realtime rail data and services to North American railroads and shippers, also implemented provisioning software for its customers.

A subsidiary of the Association of American Railroads, Railine provides hosted applications and data for the railroad industry. The company has 5,000 customers

Tech blog

A provisioning product must be integrated with a range of target applications, such as Microsoft products and mainframe systems, as well as with human resources data sources and directories. It must also provide a client interface that works for both IT and users. With all of these requirements, provisioning systems are

rarely plug-and-play.
"One of the problems is
that vendors are very good
at selling what their suites
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Jay O'Donnell, president of
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Employee Lifecycle Manager, in September.

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"What they are is a bunch
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"It's up to the integrator
or customer to take those
products and assemble them
together."

FLUFF AND BUFF

Often, integrators and customers must customize. For instance, when Railinc purchased GetAccess, it had to create a different user interface, one that nontechnical users could easily navigate. O'Donnell says that's Directory-neutrality

Off-the-shelf interfaces, adapters and connectors for all of the major applications that

The ability to provision based on user preerences and application attributes, not just on

The use of a role- and rule-based access con-

The capacity to allow sers to initiate their

Support for multiple roles for individual users

not uncommon with user provisioning products. "Customers sometimes have to build business logic layers

on top," he says.

Adapters and connectors are another area in which provisioning applications

often differ. Most major vendors have good connector support, but they may not work as the customer envisions, O'Donnell says. For instance, there may not be enough application programming interfaces (API) to support certain provisioning functions. "The dedvil is in the details of con-

nectors," says O'Donnell.
Raymond James Financial found that out when it was forced to scrap its first user-provisioning implementation. The first vendor's

adapters just weren't adequate for the company's needs. "Their support was very slow in getting us answers," says Bilderbeck. "You never

really find out the details of a product until you get into the implementation." Raymond James opted to start over using Identity Center because, according to Bilderbeck, it had much more flexibility in its con-

more flexibility in its connectors. "We provision to a SQL database, LDAP directories and also some Web service APIs, and we're able to do that pretty efficiently," he says.

Despite the time and effort involved in implementation, user provisioning software is gaining in popularity, largely as a result of regulatory pressures and the increasing complexity of enterprise applications and security requirements.

According to market research firm IDC, sales of user provisioning software will grow 18.2% annually through 2010. In contrast, the growth of sales in the overall identity and access management market, which includes provisioning, is expected to be just 10.6% annually through

Another factor likely to speed deployments is the increased use of smart cards, tokens and other programmed devices that rely on software to authenticate

Gartner's Runyon notes that the diversity of systems and devices to which employees will need access will continue to grow.

"Over time, we'll start to [automatically] provision other things, not just applications," he says. "We can provision a PDA, a building ID card, the desktop PC, your portable — any number of items that you'll have to return when you leave the

company."
Hidreth is a freelance technology writer based in Waltham, Mass. Contact her at Sue.Hildreth@comcast.net.

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FLUFF AND BUFF

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Not all user provisioning products are alike. notes Gartner analyst Barry Runyon, He recommends that you look for the following characteristics when evaluating provisioning applications

Directory-neutrality

Off-the-shelf interfaces, adapters and connectors for all of the major applications that must be supported

The ability to provision based on user preferences and application attributes, not just on identity and credentials

The use of a role- and rule-based access control model

The capacity to allow users to initiate their own access requests

Support for multiple roles for individual users

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company." ■ Hildreth is a freelance technology writer based in Waltham. Moss. Contact her at Sue Hildreth a comcast.net.

Robert L. Mitchell

Broadband's Road Less Traveled

OU CAN'T get there from here. That old New England saw is an apt metaphor for the state of high-speed rural broadband. While many telecommunications carriers are posting record profits this year, millions of U.S. homes and businesses still have no access to broadband - and that's no coincidence.

The return on equity that Wall Street demands from players in today's largely unregulated telecommunications business all but requires carriers to abandon rural America.

As population density drops outside of metropolitan areas, it's impossible for telecommunications companies or cable service providers to justify the tens to hundreds of thousands of dollars per mile it can cost to bring fiber to every rural community, let alone every home.

The result: Today, just 17% of rural U.S. households subscribe to broadband service, according to the Government Accountability Office. And a recent report from the Organisation for Economic Co-operation and Development says the U.S. dropped from fourth in the world in broadband penetration in

2001 to 15th place in 2006. Communications infrastructure is widely seen as the biggest driver of economic growth, yet 21% of Americans - the nearly 60 million people who live in rural areas - are often underserved.

Kim Rossev is one of them. Soon after moving to Gilsum, N.H. (population 811). Rossey learned that he couldn't get broadband to support his Web programming business. TooCoolWebs, DSL wasn't available, and the local cable service provider wasn't interested in extending the cabling for its broadband service the three-tenths of a mile required to reach Rossey's house - even if

he paid the full \$7,000 cost. Rossey ended up signing a two-year, \$450-permonth contract for a T1 line that delivers 1.44Mbit/ sec, of bandwidth. He pays 10 times more than the cable provider would have charged and receives one

■ Rural residents without broadband could be shut out of New Economy

quarter of the bandwidth. Limited options for highspeed Internet connectivity are stiffing bigger rural companies too, Earlier

this year, a \$1 billion-plus e-commerce business was left scrambling for answers after Verizon an nounced that it was selling its rural telecommunications business in New England to the much smaller. less well-capitalized Fair-Point Communications.

"These guys were freaking out because the only network they've been able to have up there is an [asynchronous transfer mode] network, and it's going away when Verizon leaves," says an analyst who consulted with the company

and asked not to be identi-

fied. "They may have to move [to another state]." The Internet is becoming the road to the workplace. The number of U.S. homeoffice households is expected to grow from 35.7 million today to 38.3 million in 2011, according to 1DC. But rural workers without



broadband could be shut out of New Economy jobs. Alpine Access hires its workforce of 7,500 homebased call center agents over the Internet, and broadband is the price of admission. "Access through our Web site is the only way you can become an employee here," says Rick Owens, vice president of technology. "Some type of broadband service is neces sary." Dial-up won't cut it because the applet that connects employees to Alpine Access systems requires a high-speed connection.

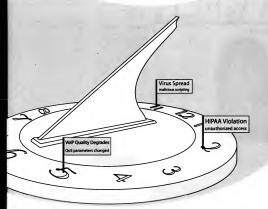
Rural areas need broadband. But deregulation has freed carriers from any real obligation to offer it. The market will never provide universal broadband access without regulation or subsidies, but the U.S. lacks both a coherent policy and the political will to address the issue. Even as the telephony infrastructure itself is absorbed into the Internet, some policymakers still fail to view broadband as the new

critical infrastructure. Rossey remains incredulous about his experience. "If you can bring electricity to a house, we should be able to bring Internet access," he says.

You'd think so. At this point, however, it's probably too late to go back to the future.

Robert L. Mitchell is a Computerworld national correspondent. Contact him at robert mitchell@ computerworld.com.

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Career Watch



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The author of
Managing the
Test People
talks about the
special skills
needed to lead
techies

How is managing a team of techies different from managing other kinds of office workers? Technical people are

motivated by Interesting work. They will put up with abominable working conditions if they get to work on something that interests them. I've managed people who had to be sent home at night. But technical people without interesting work are very difficult to manage. Their active minds tend to get them into trouble. A happy team is a group that is busy and too intrigued with their project to get mired down with internal politics. In contrast, I find office workers to be more interested in the overall iob than the task at hand. Environment, recognition and security are more important to them.

I've also found that technical people need to have adequate playtime. Ideas are exchanged and expanded while they play ping-pong or walk around the parking lot. Allowing people the freedom to wander when they need to returns high rewards that far offset the apparent tack of focus. Technical workers work all the time. Their minds are constantly multing over problems and possible solutions. What tools like slacking off may be the most productive time they spend. Give them the freedom to work.

Does a manager of techies have to be a techie? Technical people respect technical people is you can't talk the talk. It is extremely difficult, if not impossible, to gain the respect you need to effectively manage, frow can you effectively represent your people in meetings! if you don't understand what they have to know everything they do. In fact, you won't and you shouldn't, I always strive to his people who are stronger than me in areas where I'm weeks for their town weeks for their weeks or his town.

the best team possible. When I have to hire someone with expertise I don't have, I get help with the interview process from other experts.

welv process from orien experts. It's important as a manager to admit what you don't know. Technical people are quick to spot a fraud. You gain trust by being honest, and your people gain confidence in you when you show you are willing to learn from them. Technical people love to teach – be sure you love to learn.

We're always hearing that IT people need to become more like business people. Do you agree? I guess that would depend on how you define "business people." At one software company where I worked, the HR department sent out a memo asking everyone to please wear shoes for the next few days because the copier was spewing staples. Our definition of "business casual" didn't include mandatory shoes. On the other hand, that was one of the finest development/integration/test teams I ever worked with - from the management team through to the night shift computer operators. In appearance, we weren't very businesslike (hey, we had our shoes in the carl); in productivity, we were. Some IT jobs require more of a business focus than a technical focus. The most effective IT professionals are able to adapt to the situation at hand, they can behave in a more formal, businesslike fashion when meeting with customers, yet they

can still crawl into the ceiling and

find the faulty cable when needed

As IT becomes less of a backroom activity, there is more visibility to the IT activities and personnel. As such shoes orobably aren't optional in most companies. think there is still significant latitude available for highly technical people not to have the most polished

business facade

Technical people love to teach - be sure you love to learn.

Should they? Maybe, but not if It negatively affects their primary contribution to the community (if hely contribution to the community (if hely cont) think with their shoes on, and hely in past do come upwith the next brilliant innovation, then they repaid to come upwith the next brilliant innovation, then they could have the best candidates to do the next sales derno. As many-ser, if sour pile has superpixely are utilized to the best of their saletime, that of the same business; proper risk is same people should be sign in the backroom, and they're houseier thereit

How do you decide? It's important to know your team. Some peo ple do better in business situations than others. Those are the people you send to the meetings and to the customer sites. Others are most effective when hunkering down over the keyboard and typing like frends. Let them do it. People do best what they're comfortable doing. Forcing your most talented technical person to give a PowerPoint presentation may result in an hour of mumbling embarrassment - resulting in an unhappy technical powerhouse and an overall negative impression of

As a manager, it's your job to be sure your team is always represented in the best possible way. Create business growth opportunities for those who have the desire and ability

your team

to expand out into the business arena, but respect those who aren't interested. As an industry, we've finally accepted that not everyone wants to be or should manager, also have to cognize that not everyone wants to be used.

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M NORTHWESTERN STATES fice President, Integrated Progra

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no Redzniak (201) 634-2323

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M NEW ENGLAND STATES Director, Integrated Programs Deborah Crimmings (508) 271-7110 es Associate Roman (508) 271-7108 Mailing Address P.O. Box 9171, 1 Speen Street Framingham, MA 01701 Fax (508) 270-3882

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III SOUTHEASTERN STATES III SOUTHEASTERN STATES
Vice President,
Integrated Programs
Lisa Lade-Wallace (904) 284-4972
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SharkTank TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Welcome, Er, Back

Big insurance company hires contract programmer to help with the workload in IT - and she's a catastrophe. "The boss thinks things have improved, but the contractor is nothing but trouble, and staff members work extra hard to make up for her lack of technical ability," says a pilfish on the scene. Budget time rolls around, the contract position is cut, and everyone is relieved - until a few months pass and the contractor shows up again. "When we asked why, the boss replied, 'More work will get done with more workers," "fish says. "We told the boss the

hours for her to prove the point. While she was away, we got new PCs. She turned her PC on, but the monitor was black. She asked for help to figure out what was wrong. A staff member looked at the monitor, then reached around and plugged it in. Sure glad we got this one back."

Let's Try That Again

This computer room was never designed to house all the equipment that's stuffed into it, says a pilot fish on the scene. "The guy who routinely checks the equipment in this room was on vacation for a week, so I would wander through to make sure things were OK." fish says." I submitted a trouble ticket one day because the temperature in one of the rows had climbed to 90 degrees. The first response by the supervisor was, "It's supposed to be like that." His final resolution was, "Put fan very temperature is now 87."

That Didn't Do It?

Company hires a new sales

VP, and he gets his predeces sor's phone number, but the phone system is updated to display the new VP's name on the internal Caller ID display. "The help desk received an e-mail asking for Caller ID to display the new VP's name, reports a pilot fish on the line. "The user was informed that it was changed two weeks ago - to which the user replied. Tuesday, an outside salesperson calling the new VP said the old VP's name was on the phone display.' Ap-parently, he didn't understand that the sales guy's contact list on the cell phone was showing the old VP's name."

Picture This

Help desk pilot frah receives an e-mail from an administrative assistant complaining that an employee named Moe isn't in the Outhook global address list. Fish checks: Sure enough, Moe is there. So he sends back an e-mail and attackes a screenshot showing Moe on the list. Admin's reply-"I should have taken a snapshot of him missing."

■ Picture Sharky behind a grill — that's how I'll be spending my long weekend. Meanwhile, send me your true tale of IT life at sharky@computerworld. com. You'll get a snazzy Shark shirt if I use it.

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COMPANIES

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contractor has no technical

savvy, and it only took a few

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Frankly speaking Frank Hayes

The Kindness Of Strangers

T HAS NOT been a good month for data security news. First, the California Public Employees' Retirement System (Calpers) exposed the Social Security numbers of 445,000 retirees. Then the Federal Trade Commission revealed trade secrets from an antitrust lawsuit. And last week, security experts said Monster.com has leaked the personal data of hundreds of thousands of job seekers.

As it happens, the first two incidents were almost prevented, thanks to the kindness of strangers. Well, OK, not strangers

— business partners. In the Calpers case, an employee sent a disk containing Social Security numbers along with names and addresses to the company responsible for prining and mailing 445,000 brochures. Fortunately, the printer had software designed to detect SSNs and keep them from being printed. That would have saved the day.

Unfortunately, many of the Calpers SSNs had leading zeroes, which fooled the software. As a result, full or partial SSNs were printed on many of the address labels.

At the FTC, the problem was with a legal document that was part of the commission's lawsuit to block the buyout of organic grocery chain Wild Oats by a competitor, Whole Foods. The document was posted on a federal court's online database, and the FTC was supposed to redact it for public viewing — with confidential information blacked out, including tactics Whole Foods' uses with suppliers to keep from be-

ing undercut by Wal-Mart.
But the "blacked out"
information was easy to
retrieve with a simple cut
and paste. Fortunately,
court employees spotted
the problem and pulled
down the filing — but
unfortunately not before
it was downloaded by the
Associated Press and the
trade secrets were distributed to newspapers.

(Since then, a federal judge has OK'd the buyout,

■ The more our business partners can help guard against improper disclosures, the better off we'll be. the FTC has appealed that decision, and Whole Foods says it is considering a lawsuit against the FTC for revealing its trade secrets.) Those partners weren't

able to save Calpers and the FTC from breaching confidentiality, But they tried, and that's good. Defense in depth shouldn't stop at an organization's borders. The more business partners can help guard against improper disclosures, the better off every organization — and

Of course, that's no replacement for basic data security inside the organization. That's why the FTC is investigating how an employee failed to properly black things out, while Calpers says it is now looking at ways to eliminate its use of Social Security numbers.

its customers - will be.

Then there's Monster.
This time, the partners —
recruiters and HR people
who use Monster to look



for employees — were the ones whose PCs were percrated first. Using their stolen Monster log-ins, attackers collected job seekers' résumés to harvest names, addresses, phone numbers and e-mail addresses. All in all, Lo filo ne coords about several hundred thousand people were stolen, according to Symantee security analyst Amado Hidalee.

Then that data was used to trick job seekers into downloading malware. Monster says it does its best to watch out for improper activity. But that's

hard to do when your partners are the ones who open the door for attackers. And anyhow, we can't rely on the kindness of

strangers for our security. But we don't have to. We can talk with our business partners. We can find out how they're backstopping our security efforts and encourage them to do more. We can include them in our postmortems of breaches. disclosures

By including those partners in our security efforts, we add just a little more depth to our defense. It won't always save us, as Calpers and the FTC learned. But it could help. And when it comes to

and near misses.

staying out of the data security headlines, we need all the help we can get. # Frank Hayes is Computerworld's senior news columnist. Contact him at frank_ hayes@computerworld.com.

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